Studies on the intestinal microflora of chicken under tropical condition

ABSTRACT

Three media, i. e., MOD-SD, M98-5 and M98-5 supplemented with chicken fecal extract were tested as isolation media for anaerobic bacteria present in the duodenum, jeju-ileum and cecum of chicken. The results showed that the mean colony counts of medium M98-5 were similar with those of MOD-SD medium in all intestinal samples at the incubation periods of 2, 6 and 10 days. Supplementation with chicken fecal extract of M98-5 medium significantly increased ($p < 0.05$) the colony counts of bacteria from the duodenum, jeju-ileum and cecum. The colony counts at 6-day incubation were similar with those at 10-day incubation, but were much higher than the counts at 2-day incubation. The major types of bacteria found in the duodenum and jeju-ileum of chicken were tentatively identified as Lactobacillus, Streptococcus and E. coli. In the cecum, ten tentatively identified groups of bacteria, namely, Streptococcus, Staphylococcus, Lactobacillus, E. coli, anaerobic coccus, Eubacterium, Propionibacterhtm, Clostridium, Fusobacterium and Bacteroides were isolated. Anaerobes were found to comprise nearly the entire microbial population of the cecum. Predominating in all sections of the intestine were homoferrnentative lactobacilli. The main Lactotacillus species in chicken intestine were L. acidophilus, L. fermentum and L. brevis.

Keyword: Bacteria; Chicken; Intestine; Lactobacillus; Media